

REMARKS

This paper is responsive to the non-final Office Action issued October 1, 2009. Reconsideration and allowance of claims 1, 2, 6, 9-16, 17, 19, 20, and 23-27 are requested.

The Office Action

The Examiner's withdrawal of the allowability of all claims is noted with disappointment.

Claims 1, 2, 6, 9-11, 15-18, 21, and 23 stand rejected under 35 U.S.C. § 103 over Dunseath (US 4,669,496) as modified by Lundbäck (US 4,646,747).

Claims 9-11, 18, 20, and 21 stand rejected under 35 U.S.C. § 103 over the previously applied and withdrawn combination of Byers (US 4,969,468) as modified by Booker (US 2003/0114906).

Claim 12 stands rejected under 35 U.S.C. § 103 over the previously applied and withdrawn combination of Byers as modified by Booker, as further modified by Ingman (US 2002/0082668).

Claims 13 and 14 do not stand rejected on art and are considered to contain allowable subject matter.

Claim 19 stands rejected over the previously applied and withdrawn combination of Byers as modified by Booker, as further modified by Granek (US 4,729,377).

Claims 1, 2, 6, and 13-17 Distinguish Patentably Over the References of Record

Claim 1 calls for an electrode including a body of an electrically conductive elastic material with a working surface exhibiting projections of the electrically conductive elastic material. If one were to combine Dunseath and Lundbäck, the combination would not meet this limitation of claim 1. It is submitted that if one were to combine Lundbäck with Dunseath, the result would be a conductive cellular foam pad, such as shown in Figure 1a of Dunseath, layered to a rigid or stiff electrode plate 1 as shown in Lundbäck. Such a combination clearly does not meet the limitations of claim 1.

Second, one would not combine Lundbäck with Dunseath because such combination would defeat the functionality of Dunseath and Lundbäck. Dunseath says that the electrode material must be flexible in order to conform to a body surface contour, yet possess sufficient resiliency to maintain intimate contact with the skin despite dynamic variations in contour, for example due to breathing or similar bodily movement. By contrast, Lundbäck assures contact with the skin by drawing a controllable vacuum in chamber 22 (lead line inaccurately drawn) which, due to sealing rim 13, causes contact between the electrode plate 1 and the skin. The contact is controlled by the vacuum drawn through tube 8. The electrode plate 1 should be stiff and firm. Introducing a resiliency between the stem 22 and the electrode plate 1 of Lundbäck or in the electrode plate itself would create a variable in the amount of force with which the electrode plate 1 contacts the skin, a variable which is not controllable by adjusting the drawn vacuum.

Moreover, Dunseath and Lundbäck use different mechanisms to assure contact between the skin and the electrode. Dunseath uses resiliency, such that the electrode dynamically conforms to variations in the contour during breathing or similar bodily movement. By contrast, Lundbäck uses a vacuum which holds a firm or stiff electrode against the skin with a selected amount of force.

Covering the cellular foam of Dunseath with the electrode plate 1 of Lundbäck would defeat the resiliency of the Dunseath electrode and would prevent it from functioning by using its resiliency to maintain intimate contact with the skin during breathing or bodily movement.

Accordingly, it is submitted that claim 1 and claims 2, 6, 13-17, and 24 dependent therefrom distinguish patentably and unobviously over the references of record.

Claim 6 calls for a wearable fabric-based elastic belt. Column 4, lines 32-62 and column 7, lines 38-53, referenced by the Examiner, do not disclose or suggest such a belt. Accordingly, it is submitted that claim 6 distinguishes yet more forcefully over the references of record.

It is understood that claims 13 and 14 are in condition for allowance.

Claim 16 calls for electrically conductive rubber. The Examiner does not allege that either Dunseath or Lundbäck disclose the use of electrically conductive

rubber. Indeed, neither Dunseath, nor Lundbäck, nor the combination thereof, disclose the use of electrically conductive rubber. Accordingly, it is submitted that claim 16 distinguishes yet more forcefully over the references of record.

Claim 17 calls for a wearable garment with a fabric based elastic section, the sensor mounted to the garment fabric based elastic section. The Examiner has pointed to no section of Dunseath or Lundbäck which disclose mounting the sensor arrangement to a garment fabric based elastic section and, indeed, it is submitted that they do not show this combination. Accordingly, it is submitted that claim 17 distinguishes yet more forcefully over the references of record.

Dependent claim 24 has been amended to add subject matter from allowable dependent claim 13. Accordingly, it is submitted that claim 24 distinguishes patentably over the references of record.

MPEP § 2144.03

In Section 6 which starts at the bottom of page 3 of the Office Action, and in the preceding paragraph at the end of Section 5, the Examiner makes various allegations, both explicit and implicit, about that which he asserts are well-known in the art. Pursuant to MPEP § 2144.03, the applicant respectfully traverses such assertions and, pursuant to MPEP § 2144.03, puts the Examiner to his proofs to cite an appropriate reference which shows that which the Examiner alleges to be well-known is, in fact, well-known in the context of the present claims.

Claims 9-12 and 18-20 Distinguish Patentably Over the References of Record

Claim 18 calls for an electrode which includes a layer of electrically conductive elastic material and a plurality of prefabricated conductive metallic elements pressed into and projecting from a face of the layer. Neither Dunseath nor Lundbäck disclose such a combination. Moreover, the Examiner asserts that it would be obvious to make the electrode and its projections of the same material, which is clearly contrary to the above-discussed limitation. Dunseath discloses a conductive foam electrode which, if better contact with the skin is desired, can be coated with a smooth-as-glass conductive graphite layer (column 5, lines 1-19). There is no suggestion in Dunseath of pressing prefabricated conductive elements into a layer of

electrically conductive elastic material. Lundbäck does not cure this shortcoming of Dunseath. First, Lundbäck does not have an electrode formed of an electrically conductive elastic material. Second, the electrode plate 1 of Lundbäck has a metallic front surface 4 which is in the form of a continuous layer. Lundbäck, like Dunseath, fails to teach or fairly suggest pressing prefabricated metallic elements into an electrically conductive layer. Accordingly, it is submitted that claim 18 and claims 19-12, 19, and 20 dependent therefrom distinguish patentably over the references of record.

Claim 9 calls for an insulating layer covering the skin-contacting face of the electrically conductive elastic material with the metallic elements projecting through the insulating layer. Neither Dunseath nor Lundbäck, nor the combination thereof, disclose or fairly suggest this combination.

The Examiner does not reject claims 12 and 19 over the combination of Dunseath and Lundbäck.

Claim 20 calls for the electrically conductive elastic material to include electrically conductive rubber. Neither Dunseath nor Lundbäck, nor the combination thereof, disclose, teach, or fairly suggest the use of conductive rubber. Accordingly, it is submitted that claim 20 distinguishes yet more forcefully over Dunseath and Lundbäck.

Regarding the rejection of claims 9-12 and 18-20 based on Byers and Booker, the applicant refers the Examiner to Amendment F of May 21, 2009, Amendment E of January 8, 2009, and Amendment D of August 25, 2009, which discussed the combination of Byers and Booker and ultimately resulted in the withdrawal of the rejection. The applicant also directs the Examiner's attention to the Office Action of March 30, 2009, in which the subject matter of claim 22 in Section 8 was held to be allowable if rewritten in independent form including all of the limitations of the base claim. In Amendment F of May 21, 2009, claim 22 was combined with its base claim 18 and presented as claim 18 amended. For the reasons set forth in the earlier Amendments and Office Action, it is submitted that the Examiner previously correctly adjudicated that claim 18 as it now stands distinguishes patentably over the references of record. Claims 9-12, 19, and 20 also distinguish patentably by virtue of their dependence on claim 18.

Moreover, neither Byers nor Booker, nor the combination thereof, disclose or fairly teach an electrode including a layer of electrically conductive elastic material into which a plurality of prefabricated conductive metallic elements have been pressed. It is noted that in Section 7 of the Office Action, the Examiner does not allege that either Byers or Booker, or the combination thereof, disclose this claimed subject matter. Nor, does the Examiner allege that this subject matter would be obvious for other reasons.

Dependent claims 9-12, 19, and 20 set forth additional limitations which distinguish yet more forcefully over the Byers and Booker references.

Accordingly, it is submitted that claim 18 and claims 9-12, 19, and 20 dependent therefrom distinguish patentably and unobviously over the references of record.

**Claims 23 and 25-27 Distinguish Patentably
Over the References of Record**

Claim 23 calls for a body of an electrically conductive elastic material with a working surface exhibiting projections of electrically conductive elastic material. Dunseath does not disclose an electrode with projections, much less projections of an electrically conductive elastic material. Lundbäck does not cure this shortcoming of Dunseath. To the extent that the electrode plate 1 has protuberances, such protuberances are part of a metallic layer.

Dependent claim 25 calls the projections to be fabricated of an electrically conductive rubber or an electrically conductive graphite and silicon gel. As discussed above, neither Dunseath nor Lundbäck, nor the combination thereof, disclose or fairly suggest the use of electrically conductive rubber or an electrically conductive graphite and silicon gel for an electrode.

Dependent claim 26 has been amended to add subject matter from allowable dependent claim 13.

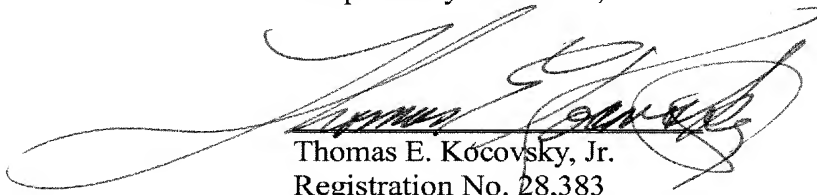
Dependent claim 27 calls for the electrode body to be integrated with an elastic belt by a molding operation. Neither Dunseath nor Lundbäck disclose an elastic belt, much less an elastic belt with which an electrode body is integrated by a molding operation.

Accordingly, it is submitted that claim 23 and claims 25-27 dependent therefrom distinguish patentably and unobviously over the references of record.

CONCLUSION

For the reasons set forth above, it is submitted that claims 1, 2, 6, 9-17, 19, 20, and 23-27 distinguish patentably and unobviously over the references of record. An early allowance of all claims is requested.

Respectfully submitted,



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